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This amendment is being filed in response to the Office Action dated February 15, 2007. For the following reasons, this application should be considered in condition for allowance and the case passed to issue.

Claims 1 and 8-14 were rejected under 35 U.S.C. §112, first paragraph. Claims 1-5 and 8-16 were rejected under 35 U.S.C. §112, second paragraph. These rejections come only after two Office Action responses were filed, with the claims remaining as originally filed. These rejections were not made in any of the first two Office Actions. As such, it is respectfully submitted that these rejections are not correct and that the consideration of the claims with respect to 35 U.S.C. §112 contained in the prior Office Actions is correct. However, in response to the current rejection under 35 U.S.C. §112, first paragraph, it is respectfully submitted that Applicant has the right to claim an application as broadly permitted by the prior art, and is not limited to only the specific embodiments described in the specification. Otherwise, there would be no need for claim language to define the invention, but rather a mere picture claim would suffice. In any event, however, Applicant has amended claim 1 in a manner that overcomes the rejection of the claims under 35 U.S.C. §112, first paragraph. Similarly, claims 8, 11 and 14 have been amended. Reconsideration and withdrawal of the rejection of claims 1 and 8-14 under 35 U.S.C. §112, first paragraph, are therefore respectfully requested.

Claims 1-5 and 8-16 were rejected under 35 U.S.C. §112, second paragraph, for allegedly rendering the claims incomplete for omitting essential steps. The language of the claims was said to indicate a missing step necessary to explain how the method accomplished is providing desired resizing of a mirrored virtual disk by manipulating RAIDs. It was unclear to the

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Examiner what kind of manipulation occurs to accomplish the resizing, and the Examiner stated that Applicant could not claim every possible method of resizing a mirrored virtual disk as the claim language suggests. This language has been changed to "manipulating RAID's in the RAID storage system assigned to the mirrored virtual disks prior to resizing the mirrored virtual disks. Also added to the claim is the limitation of resizing the mirrored virtual disks. Hence, claim 1 should now be considered to overcome the rejection of claim 1 under 35 U.S.C. §112, second paragraph. Similar limitations have been provided in the other independent claims.

Reconsideration and withdrawal of the rejection of 35 U.S.C. §112, second paragraph, of claims 1-5 and 8-16 are therefore respectfully requested.

Claims 1-3, 6, 8 and 11-15 were rejected under 35 U.S.C. §102(e) as being anticipated by Kim et al. (hereinafter "Kim"). This rejection is hereby traversed and reconsideration and withdrawal thereof are respectfully requested. The following is a comparison of the present invention with the Kim reference.

Embodiments of the present invention, as currently claimed in claim 1, for example, relate to a program storage device readable by a computer tangibly embodying one or more program of instructions executable by the computer to perform a method for dynamically resizing mirrored virtual disks and RAID's in a RAID storage system. The method comprises receiving a request to dynamically resize mirrored virtual disks in a RAID storage system. The method further comprises manipulating RAID's in a RAID storage system assigned to the mirrored virtual disks prior to resizing a mirrored virtual disks. The mirrored virtual disks are then resized. The resized mirrored virtual disks are provided for operation. It is respectfully submitted by that Kim fails to show or suggest these features.

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In order to anticipate the claims of an application under 35 U.S.C. §102(c), a single prior art reference must identically disclose each and every element of the claimed invention. It is respectfully submitted that Kim fails to satisfy this high burden.

Kim, U.S. Patent Application Publication 20030023811 relates to a method for managing logical volumes in order to support dynamic online resizing and software RAID. The Kim reference, as best understood, relates to a method of managing a logical volume for minimizing a size of metadata and for supporting dynamic online resizing. It is not clear that Kim discloses dynamically resizing mirrored virtual disks. What is described is the managing of a logical volume, but not necessarily mirrored virtual disks. Further, unlike the present invention, it appears that a RAID level of a volume is applied only to a newly added storage space. Referring to paragraph [0042], Kim states that by providing flexibility of mapping, the size of volume can be dynamically increasing and decreasing effectively during operating a system in a RAID level of the volume can be applied to a newly added storage space. In contrast to this, and as now provided in claim 1, (and the other independent claims), the RAIDs in the RAID storage system are manipulated *prior* to resizing the mirrored virtual disks.

Kim therefore fails to show or suggest each and every limitation of claim 1, as well as the remaining independent claims. There is no clear disclosure of manipulating RAIDs in the storage system prior to resizing mirrored virtual disks. In the past, if the virtual disks are in a mirrored state, dynamic resizing could be a problem. Certain volumes, for example, have been problematic because most storage systems are not virtualized. Shrinking meant lots of wasted space, and any operating system would crash at the size if its Vdisk decreases by more than the operating system as currently using. In addition, the user may want to expand and/or shrink the entire mirror set. The complexity of the problem has deterred companies from attempting this

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functionality. The most common approach is simply to break mirrors prior to resizing and then re-establish the mirrors afterwards. By manipulating the RAID's in the RAID storage system prior to resizing the mirrored virtual disks, the virtual disk size of the source can be changed from the operating systems can scan the virtual disks and detect the new size and start using the full amount of space. As Kim fails to identically disclose each and every element of the claimed invention, the rejection of claims 1-3, 6, 8 and 11-15 under 35 U.S.C. §102(e) should be reconsidered and withdrawn. Such action is courteously solicited.

The indication of allowability of claims 4-5, 7, 10, 13 and 16 is gratefully acknowledged. However, these claims have not been rewritten into independent form at this time in light of the arguments above.


In light of the amendments and remarks above, this application should be considered in condition for allowance the case passed to issue. If you have any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated to justify prosecution of the application.

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To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 502624 and please credit any excess fees to such deposit account.

Respectfully submitted,

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